

A Simple Crest Factor Reduction Technique For Multi-Carrier Signals

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Abstract:

A technique for Crest Factor reduction of multi-carrier signals is described. The input to the multi-carrier amplifier is modified by a Crest Factor reduction circuit, prior to being applied to the amplifier. The Crest Factor reduction circuit clips the amplitude of the signal, converts the clipped signal to baseband to produce the baseband representative of each carrier, filters each baseband representative to remove the unwanted signals, up converts each baseband representative to its multi-carrier baseband frequency and finally the up converted signals are combined to produce the multi-carrier baseband signal. The input to the Crest Factor reduction circuit could be a baseband, an intermediate frequency (IF) or radio frequency (RF) signal. The Crest Factor reduction could be performed in digital or analog domain.